REMARKS

Applicants respectfully request consideration of the present U.S. Patent application as amended herein. Claims 15, 16, 18, 19, 21-24, 29 and 32 have been amended. Claims 17, 20, 29 and 32 have been canceled without prejudice. No claims have been added. Thus, claims 15, 16, 18, 19 and 21-24 are pending.

Objections to the Drawings

The drawings were objected to for various informalities. Specifically, in Figure 1 "computer system 100" disclosed in the specification is not labeled and in Figure 2, "reset circuitry 260" should be changed to --reset circuitry 265--. The requested changes have been made to Figure 1 in the accompanying Request to Approve Drawing Changes. Updated formal drawings will be submitted at a later date. As indicated on the copy of Figure 2, the reset circuitry is labeled 265, which is consistent with the specification. Therefore, Applicants request that the objection to the drawings be withdrawn.

Objections to the Specification

The specification was objected to for various informalities. The changes suggested in the Office Action have been made in this amendment. Therefore, Applicants request that the objections to the specification be withdrawn.

Claim Rejections - 35 U.S.C. § 103

Claims 15-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,455,561 issued to Brown (*Brown*) in view of U.S. Patent No. 5,731,832 issued to Ng (*Ng*). Claims 17 and 20 have been canceled without prejudice. Therefore, the rejection of claims 17 and 20 under 35 U.S.C. § 103(a) is moot. For at least the

reasons set forth below, Applicants submit that claims 15, 16, 18, 19 and 21-24 are not rendered obvious by *Brown* and *Ng*.

Claim 15 recites the following:

> a memory to store a weighted average of brightness corresponding to one or more frames representing a view at different times; and
>
> a processor coupled to the memory to compare the property of two frames to each other and to cause the computer system to exit the inactive mode in response to the weighted average of brightness of the two frames differing by a predetermined amount.

Thus, Applicants claim causing an computer system to exit an inactive mode in response to detecting motion by comparing two video frames.

In general, a computer system is used by a user or as part of a larger system in which the computer system receives inputs and operates on those inputs. As an energy saving feature, many computer systems enter an inactive (e.g., sleep, low power) state when the computer system does not receive input for a predetermined period of time. For example, if a user does not provide the computer system with any input via a keyboard or cursor control device for five minutes, the computer system enters a sleep state. The computer remains in the sleep state until the user provides some input to the computer system. However, during normal operation, the computer system is not in the sleep state.

Ng discloses comparing two video frames to determine motion. See col. 4, line 64 to col. 5, line 7. The system disclosed by *Ng* compares video frames during normal operation. See col. 3, lines 55-65. *Ng* does not suggest comparing video frames while a system is in an inactive mode. Therefore, *Ng* does not disclose causing an apparatus to exit an inactive mode in response to detecting motion by comparing two video frames.

Brown discloses using a camera to monitor a scene during periods of inactivity. See col. 4, lines 5-6. However, *Brown* does not disclose monitoring the scenes with a computer system that is in an inactive state in response to lack of input for a predetermined period of time. Therefore, *Brown* does not disclose causing an apparatus to exit an inactive mode in response to detecting motion by comparing two video frames.

Because neither *Ng* nor *Brown* teach or suggest monitoring a scene while a computer system is in a state of inactivity and causing the computer system to exit the inactive state in response to detecting motion, no combination of *Ng* and *Brown* teaches or suggests the invention as claimed in claim 15.

Claims 16, 18, 19 and 21 depend from claim 15. Because dependent claims include the limitations of the claims from which they depend, Applicants submit that claims 16, 18, 19 and 21 are not rendered obvious by *Ng* and *Brown* for at least the reasons set forth above.

Claim 22 recites the following:

> receiving a first frame corresponding to a view at a first time while in the inactive mode;
> determining a weighted average brightness for the first frame;
> receiving a second frame corresponding to a view at a second time while in the inactive mode;
> determining a weighted average brightness for the second frame; and
> causing the computer system to exit the inactive mode if the weighted average brightness for the first frame differs from the weighted average brightness for the second frame by a predetermined amount.

Thus, Applicants claim receiving and comparing frames while the computer system is in the inactive mode.

As mentioned above, neither *Ng* nor *Brown* teach or suggest monitoring a scene while a computer system is in a state of inactivity and causing the computer system to exit

the inactive state in response to detecting motion. Therefore, no combination of *Ng* and *Brown* teaches or suggests the invention as claimed in claim 22.

Claims 23 and 24 depend from claim 22. Because dependent claims include the limitations of the claims from which they depend, Applicants submit that claims 23 and 24 are not rendered obvious by *Ng* and *Brown* for at least the reasons set forth above.

Claims 29 and 32 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,631,701 issued to Miyake (*Miyake*) in view of *Brown* and *Ng*. Claims 29 and 32 have been canceled without prejudice. Therefore, the rejection of claims 29 and 32 under 35 U.S.C. § 103(a) is moot.

Conclusion

For at least the foregoing reasons, Applicants submit that the rejections have been overcome. Therefore, claims 15, 16, 18, 19 and 21-24 are in condition for allowance and such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN, LLP

Date: APRIL 2, 2001

Paul A. Mendonsa
Reg. No. 42,879

12400 Wilshire Boulevard, Seventh Floor
Los Angeles, CA 90025-1026
(503) 684-6200

MARKED-UP AMENDED CLAIMS

IN THE SPECIFICATION

In the paragraph from lines 7 to 12 of page 13:

In step 320 the frame is stored in memory. In step 330, the frame stored in memory is compared to a previous frame stored in memory. In step 340, the video camera determines whether the frames that were compared are the same. If the frames are [not] the same, the video camera returns to step 300 to continue capturing scenes, converting the scenes to frames and comparing frames.

In the paragraph from lines 9 to 13 of page 15:

In one embodiment, video camera 500 includes lens 510, CCD 520 and converter 530 that function in a similar manner as lens 410, CCD 420 and converter 430 discussed above. The output of converter 530 is coupled to processor 102 via frame line 540. Alternatively, converter 530 may be coupled to bus 101 [100] directly or though an interface via line 540.

IN THE CLAIMS

15. (Twice Amended) A[n apparatus] computer system that operates in a active mode and enters an inactive mode in response to a predetermined period of inactivity, [generates an output signal in response to a view changing] the computer system comprising:

a memory to store a weighted average of brightness [property] corresponding to [of] one or more frames representing a [the] view at different times; and

a processor coupled to the memory to compare the property of two frames to each other and to cause the computer system to exit the inactive mode [generate the output signal] in response to the weighted average of brightness [property] of the two frames

differing by a predetermined amount[, wherein the difference between the two frames is determined by comparing a weighted average of brightness for the two frames].

16. (Amended) The computer system [apparatus] of claim 15 further comprising reset circuitry coupled to the processor to power up the computer system [an electronic device in response to the output signal generated by the processor] to exit the inactive mode.

18. (Amended) The computer system [apparatus] of claim 16, wherein the processor receives frames at a first frame rate when the computer system [electronic device] is in the inactive mode [powered up] and the processor receives frames at a second frame rate when the electronic device is not in the inactive mode [powered up].

19. (Amended) The computer system [apparatus] of claim 16, wherein the processor determines the frame property when the computer system [electronic device] is in the inactive mode [not powered up] and does not determine the frame property when the electronic device not in the inactive mode [is powered up].

21. (Amended) The computer system [apparatus] of claim 15, wherein the processor compares frames by comparing a weighted average brightness of consecutive frames.

22. (Twice Amended) A method of causing a computer system [an electronic device] to exit an inactive mode that is entered in response to a predetermined period of inactivity, [power up from a reduced power state] the method comprising:

receiving a first frame corresponding to a view at a first time while in the inactive mode;

determining a weighted average brightness for the first frame;

receiving a second frame corresponding to a view at a second time while in the inactive mode;

determining a weighted average brightness for the second frame; and

causing the computer system [electronic device] to exit the inactive mode [power up] if the weighted average brightness for the first frame differs from the weighted average brightness for the second frame by a predetermined amount.

23. (Amended) The method of claim 22 wherein determining the property is performed by a processor internal to a video camera coupled to the computer system.

24. (Amended) The method of claim 22, wherein frames are received at a first frame rate when the computer system [electronic device] is not in the inactive mode [powered up] and at a second frame rate when the electronic device is [not powered up] in the inactive mode.